

Remarks/Arguments

Rejection of Claims 1-13 and 19 under 35 U.S.C. §103(a)

The Examiner rejected Claims 1-13 and 19 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,063,368 (Ettehadieh). Applicant respectfully traverses the rejection.

Ettehadieh does not teach, suggest, or motivate a single magnet

In some aspects, the Claim 1 element of: “at least one magnet having a lower side” comprises a single magnet. For example, as disclosed by Figures 2-4 and paragraphs [0023] to [0027] of the present application. Ettehadieh does not and cannot teach, suggest, or motivate the use of a single magnet. As shown in Figures 3, 4, 5, 7, and 8, Ettehadieh clearly teaches the use of pluralities of magnets in all cases, specifically, a first plurality of magnets 14 and a second plurality of magnets 18. Assuming *arguendo* that the four primary magnets 14 could be considered as a single primary magnet (which is not the case) and the four secondary magnets 18 could be considered as another single secondary magnet (which also is not the case), Ettehadieh still cannot combine the single primary and secondary magnets. Ettehadieh teaches that magnets 14 and 18 must have different strengths: “four strong magnets 14” (col. 3, lines 23 and 24) and “four smaller and weaker secondary magnets 18” (col. 3, lines 28 and 29). A single magnet cannot have the characteristics as two stacked magnets having different strengths. Further, Ettehadieh teaches that two magnet groupings of different strengths are necessary to his invention (see col. 4, lines 5 to 33). That is, the two magnet groupings are what distinguish his invention from the prior art.

The Examiner has stated in the Response to Arguments that the plurality of magnets 14 can be interpreted as a single magnet. Applicant disagrees. For example, the magnet field lines for a single magnet as recited in Claim 1 and two magnets 14 stacked as shown in Ettehadieh are very different. To illustrate this difference, Applicant has attached Exhibits 1 and 2 in the Appendix. Exhibit 1 shows the magnetic field lines for a dipole (a simple approximation of a

magnet). Exhibit 2 shows the magnetic fields for “stacked” dipoles (a simple approximation for two stacked magnets). Exhibits 1 and 2 clearly show the difference in the field lines for these two configurations. The Examiner is invited to review the website: <http://www.falstad.com/mathphysics.html> from which Applicant generated Exhibits 1 and 2.

Assuming *arguendo* that the Examiner’s interpretation is correct, the Examiner has still failed to account for the fact that Ettehadieh teaches that two different pluralities of magnets are necessary for his invention, as shown *supra*.

Ettehadieh does not teach the use of a single plurality of magnets

In some aspects, the Claim 1 element of “at least one magnet having a lower side” comprises a plurality of magnets, for example, as disclosed by Figure 7 and paragraph [0030] of the present application. Ettehadieh still does not and cannot teach, suggest, or motivate these aspects. As shown *supra*, Ettehadieh always teaches having first and second pluralities of magnets having different respective sizes and strengths. This is contrary to the aforementioned aspects of a single plurality of magnets recited in Claim 1.

Modifying Ettehadieh according to the present invention would render Ettehadieh unsatisfactory

As noted *supra*, the very basis of Ettehadieh’s invention is the configuration of respective pluralities of magnets 14 and 18 having different respective strengths. Therefore, to modify Ettehadieh to create the configuration recited in Claim 1 and shown in Figures 2-4 of the present invention would nullify the benefits that Ettehadieh claims for his invention (Applicants are making no statement regarding the possible efficacy of Ettehadieh’s invention) and would nullify the novelty he claims with respect to the prior art. “If proposed modifications would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).”

Modifying Ettehadieh according to the present invention would change the principle of operation for Ettehadieh

As noted *supra*, Ettehadieh relies on the configuring of two pluralities of magnets having different strengths to create the particular magnetic field configuration that he asserts as being

novel. In particular, Ettehadieh takes great pains to distinguish between his configuration as shown in Figure 7 and a prior art configuration shown in Figure 6 (see col. 4, lines 5 to 33). If Ettehadieh modifies his assembly according to the configurations shown in Figures 2 or 7 of the present invention, then Ettehadieh has changed the principle of operation for his invention. "If the proposed modifications or combinations of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)."

Ettehadieh teaches against the present invention

As noted *supra*, Ettehadieh relies on the configuring of two pluralities of magnets having different strengths to create the particular magnetic field configuration that he asserts as being novel. Claim 1 recites: "at least one magnet having a lower side,..." This element is contrary to Ettehadieh's aforementioned requirement. That is, under no conditions can Ettehadieh teach, suggest, or motivate the use of only one magnet, or a plurality of magnets having a same respective strength. A *prima facie* case of obviousness can be rebutted if one of the cited references teaches away from the claimed invention. See *In re Geisler*, 43 U.S.P.Q. 2d 1362, 1366 (Fed. Cir. 1997).

For the reasons stated above, Ettehadieh does not satisfy the requirements for establishing *prima facie* obviousness with respect to Claim 1. Therefore, Claim 1 is patentable over Ettehadieh. Claims 2-13 and 19, dependent from Claim 1, enjoy the same distinction from the cited prior art. Applicant requests that the rejection be removed.

Rejection of Claims 14-18 under 35 U.S.C. §103(a)

The Examiner rejected Claims 14-18 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,063,368 (Ettehadieh) in view of U.S. Patent No. 5,271,369 (Melendrez). Applicant respectfully traverses the rejection.

Claim 14

Claim 14 recites: “a first magnet having a lower side centrally disposed adjacent a longitudinal portion of the fuel line to provide a magnetic field proximate said fuel line; a second magnet disposed on top of said first magnet in magnetic attraction therewith...”

Ettehadieh does not teach the use of a single plurality of magnets

The Examiner has asserted that Ettehadieh shows all the elements of claim 14 except for the shield. However, applicant has shown in the arguments for Claim 1 that Ettehadieh does not teach, suggest, or motivate a plurality of same magnets as disclosed by Figure 7 and paragraph [0030] of the present application. Instead, Ettehadieh teaches the necessity of first and second pluralities of magnets having different respective sizes and strengths.

Ettehadieh does not teach the use of a plurality with two magnets

In all the embodiments taught by Ettehadieh, Ettehadieh shows four magnets in each plurality of magnets. Claim 14 recites two magnets. As discussed in the arguments for Claim 1 and shown in Exhibits 1 and 2, combinations of differing numbers of magnets do not produce the same field lines. Therefore, the magnets 14 and 18 cannot be considered the same as single respective magnets.

Modifying Ettehadieh according to the present invention would render Ettehadieh unsatisfactory

As noted *supra*, the very basis of Ettehadieh's invention is the configuration of respective pluralities of magnets 14 and 18 having different respective strengths. Therefore, to modify Ettehadieh to create the configuration recited in Claim 14 and shown in Figure 7 of the present invention would nullify the benefits that Ettehadieh claims for his invention (Applicants are making no statement regarding the possible efficacy of Ettehadieh's invention) and would nullify the novelty he claims with respect to the prior art. “If proposed modifications would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).”

Modifying Ettehadieh according to the present invention would change the principle of operation for Ettehadieh

As noted *supra*, Ettehadieh relies on the configuring of two pluralities of magnets having different strengths to create the particular magnetic field configuration that he asserts as being novel. In particular, Ettehadieh takes great pains to distinguish between his configuration as shown in Figure 7 and a prior art configuration shown in Figure 6 (see col. 4, lines 5 to 33). If Ettehadieh modifies his assembly according to the configurations shown in Figure 7 of the present invention, then Ettehadieh has changed the principle of operation for his invention. "If the proposed modifications or combinations of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)."

Ettehadieh teaches against the present invention

As noted *supra*, Ettehadieh relies on the configuring of two pluralities of magnets having different strengths to create the particular magnetic field configuration that he asserts as being novel. Ettehadieh does not teach, suggest, or motivate the use of only a single plurality of magnets having a same respective strength. A *prima facie* case of obviousness can be rebutted if one of the cited references teaches away from the claimed invention. See *In re Geisler*, 43 U.S.P.Q. 2d 1362, 1366 (Fed. Cir. 1997).

Melendrez does not cure the defects of Ettehadieh discussed above.

For the reasons stated above, Ettehadieh in view of Melendrez does not satisfy the requirements for establishing *prima facie* obviousness with respect to Claim 14. Therefore, Claim 14 is patentable over the cited prior art. Claims 15-17, dependent from Claim 14, enjoy the same distinction from the cited prior art. Applicant requests that the rejection be removed.

Claim 18

Applicant has shown that Claim 1 is patentable over Ettehadieh. Melendrez does not cure the defects of Ettehadieh. Therefore, Claim 1 is patentable over Ettehadieh and Melendrez.

Claim 18, dependent from Claim 1, enjoys the same distinction from the cited prior art.
Applicant requests that the rejection be removed.

Conclusion

Applicant respectfully submits that all pending claims are now in condition for allowance, which action is courteously requested.

Respectfully submitted,



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Attachments

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Appendix